2.0   ARIZONA STATEWIDE TRAVEL DEMAND MODEL SOCIOECONOMIC DATA

The Arizona Statewide Travel Demand Model (AZTDM) is a statewide travel demand model designed to identify transportation deficiencies and test multimodal improvement scenarios. This section details the methodology and sources used to prepare 2030 and 2050 population and employment databases for the model.

2.1 Statewide Transportation Planning Frameworks

ADOT divided the state into seven study areas for the development of the Statewide Transportation Planning Framework:

- Eastern Framework;
- Central Framework;
- Western Framework;
- Northern Framework;
- Hidden Valley Framework;
- Maricopa Association of Governments, which includes part of the Hidden Valley Framework area; and,
- Pima Association of Governments.

Figure 2-1 shows the locations of the seven regional framework study areas. Each of the framework study teams separately prepared the population and employment data from its area for the statewide travel demand model.

2.2 AZTDM Overview

The AZTDM includes nearly 1,100 internal traffic analysis zones and 35 external traffic analysis zones. A traffic analysis zone is a geographic area that the model uses to estimate travel. The roadway network includes all ADOT facilities as well as regionally significant roads. The definition of a regionally significant road varies by location. In Phoenix, for example, it is a key arterial in the urban grid. In northern Arizona on the Navajo Nation, it is a BIA route connecting remote villages.

The AZTDM uses a cross-classification trip generation model adapted from PAG that uses households, household size, and workers per household. The statewide model also forecasts truck trips using methodology from the FHWA Quick Response Freight Manual. Trip distribution is accomplished through a gravity model. Traffic assignment includes three modes – passenger car, single-unit trucks, and multiple-unit trucks. More detail on the AZTDM itself will be available in the calibration and validation report.

2.3 Socioeconomic Data Development

The ADOT Project Team relied on locally adopted or accepted planning studies to compile a statewide database of population and employment projections. For the state's urban areas, the study team compiled COG and MPO projections. The study team also relied on recently completed projections from Small Area Transportation Studies (SATS) and other studies. In some rural areas, the study team used DES projections to develop socioeconomic data.